347
SURVEYS
LGL-3-8
1522

Forest Insect Laboratory
445 U. S. Court House
Portland 5, Oregon
September 23, 1946

MEMORANDUM ON THE DOUGLAS FIR TUSSOCK MOTH OUTBREAK ON THE UMATILLA NATIONAL FOREST

On August 20 the pine beetle survey crew noted that Douglas-fir on and near the Troy check plot had been severely defoliated. From the crew's description of the insect and its damage, plus the fact that the crew members broke out with a severe rash after cruising the plot, the writer concluded that the responsible insect was the Douglas fir tussock moth. Later examination proved this surmise to be correct.

The Troy area was examined on September 18 and 19 during the course of an extensive reconnaissance of the insect situation throughout the timber stands of the Umatilla. Infestation by the tussock moth was found on a roughly triangular area bounded on the southeast by the Grande Ronde River, on the northeast by the Wenaha River, and on the west by Hoodoo Ridge. The timber stand on this area is of mixed type. Ponderosa pine predominates on southern exposures. On the level and northern exposures the stand consists principally of Douglas-fir and white fir with some ponderosa pine and larch. Only recently has the area been opened to logging.

Infestation by the tussock moth extends over some 10,000 to 12,000 acres. Heaviest defoliation exists on portions of Sections 34 and 35, T 6 N, R 42 E and Sections 3, 4, 9, and 10, T 5 N, R 42 E. Centers in which 100 percent defoliation occurred range from 10 to 50 acres in size. The aggregate of these centers of almost complete kill amounts to some 500 to 600 acres. Throughout the remainder of the affected stand scattered trees are partially defoliated, thus indicating that the tussock moth is widely and aggressively established.

Empty pupal cases with heavy deposits of eggs are abundant at the outer edges of the centers of heavy defoliation. Cocoons and eggs are also numerous on areas of light to moderate defoliation. On September 18 and 19 parasites were observed in flight but did not seem to be very abundant. Egg masses were collected for the rearing of parasites and for further biological observations.

From reports of local residents and from observations of past outbreaks, it appears that this is the second year of the outbreak. The indications are that it is continuing and that the kill during the coming season probably will be very heavy.

Submitted by,

W. J. Buckhorn
Scientific Aide